

CLAIMS

The listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A liquid crystal information display comprising a front panel of functional layers facing an observer,
a rear panel of functional layers opposite the front panel, and
a layer of liquid crystal material between the front and rear panels of functional layers ~~in which, wherein~~ the layer of liquid crystal material has parameters providing at least one interference maximum or minimum of transmission or reflection for at least one linearly polarized component of incident beam of light at at least one wavelength reflected or transmitted at the exit of the display ~~and/or at the boundary between at least two functional layers and/or the layer of liquid crystal material and a functional layer~~ front panel.

Claim 2 (original): A liquid crystal information display according to claim 1, wherein in the capacity of functional layers the display contains at least one layer of polarizer and/or at least one electrode layer and/or at least one alignment layer and/or at least one planarization layer and/or at least one retarder layer and/or at least one anti-reflective layer and/or at least one light-reflecting layer and/or at least one color filter layer and/or at least one protective layer and/or at least one layer simultaneously functioning as at least two of the above listed layers.

Claim 3 (previously presented): A liquid crystal information display according to claim 2, wherein at least one functional layer of the group comprising electrode layer, alignment layer, planarization layer, anti-reflective layer, light-reflecting layer, and color filter layer is anisotropic.

Claim 4 (currently amended): A liquid crystal information display according to claim 1 or 2, wherein the interference maximum or minimum of transmission for the reflected or transmitted light at the exit of the display ~~and/or at the boundary between at least two functional layers~~ front panel is provided with and/or without voltage bias on the electrode layer.

Claim 5 (currently amended): A liquid crystal information display according to claim 3, wherein the interference maximum or minimum of transmission for the reflected or transmitted

light at the exit of the ~~display and/or at the boundary between at least two functional layers~~ front panel is provided with and/or without voltage bias on the electrode layer.

Claim 6 (currently amended): A liquid crystal information display according to claim 1 or 2, wherein the optical thickness of at least one functional layer provides the interference maximum or minimum of transmission at the exit of the ~~display and/or at the boundary between at least two functional layers~~ front panel.

Claim 7 (currently amended): A liquid crystal information display according to claim 3, wherein the optical thickness of at least one functional layer provides the interference maximum or minimum of transmission at the exit of the ~~display and/or at the boundary between at least two functional layers~~ front panel.

Claim 8 (currently amended): A liquid crystal information display according to claim 4, wherein the optical thickness of at least one functional layer provides the interference maximum or minimum of transmission at the exit of the ~~display and/or at the boundary between at least two functional layers~~ front panel.

Claim 9 (currently amended): A liquid crystal information display according to claim 5, wherein the optical thickness of at least one functional layer provides the interference maximum or minimum of transmission at the exit of the ~~display and/or at the boundary between at least two functional layers~~ front panel.

Claim 10 (original): A liquid crystal information display according to claim 1 or 2, wherein the number and parameters of all layers in the display are coordinated so as to provide the interference maximum or minimum of transmission at the exit of the ~~display~~ front panel.

Claim 11 (original): A liquid crystal information display according to claim 3, wherein the number and parameters of all layers in the display are coordinated so as to provide the interference maximum or minimum of transmission at the exit of the ~~display~~ front panel.

Claim 12 (original): A liquid crystal information display according to claim 4, wherein the number and parameters of all layers in the display are coordinated so as to provide the interference maximum or minimum of transmission at the exit of the ~~display~~ front panel.

Claim 13 (original): A liquid crystal information display according to claim 5, wherein the number and parameters of all layers in the display are coordinated so as to provide the interference maximum or minimum of transmission at the exit of the ~~display~~ front panel.

Claim 14 (original): A liquid crystal information display according to claim 6, wherein the number and parameters of all layers in the display are coordinated so as to provide the interference maximum or minimum of transmission at the exit of the ~~display~~ front panel.

Claim 15 (original): A liquid crystal information display according to claim 7, wherein the number and parameters of all layers in the display are coordinated so as to provide the interference maximum or minimum of transmission at the exit of the ~~display~~ front panel.

Claim 16 (original): A liquid crystal information display according to claim 8, wherein the number and parameters of all layers in the display are coordinated so as to provide the interference maximum or minimum of transmission at the exit of the ~~display~~ front panel.

Claim 17 (original): A liquid crystal information display according to claim 9, wherein the number and parameters of all layers in the display are coordinated so as to provide the interference maximum or minimum of transmission at the exit of the ~~display~~ front panel.

Claim 18 (original): A liquid crystal information display according to claim 1 or 2, wherein at least one polarizer is an internal one.

Claim 19 (original): A liquid crystal information display according to claim 3, wherein at least one polarizer is an internal one.

Claim 20 (original): A liquid crystal information display according to claim 4, wherein at least one polarizer is an internal one.

Claim 21 (original): A liquid crystal information display according to claim 5, wherein at least one polarizer is an internal one.

Claim 22 (original): A liquid crystal information display according to claim 6, wherein at least one polarizer is an internal one.

Claim 23 (original): A liquid crystal information display according to claim 7, wherein at least one polarizer is an internal one.

Claim 24 (original): A liquid crystal information display according to claim 8, wherein at least one polarizer is an internal one.

Claim 25 (original): A liquid crystal information display according to claim 9, wherein at least one polarizer is an internal one.

Claim 26 (original): A liquid crystal information display according to claim 10, wherein at least one polarizer is an internal one.

Claim 27 (original): A liquid crystal information display according to claim 11, wherein at least one polarizer is an internal one.

Claim 28 (original): A liquid crystal information display according to claim 12, wherein at least one polarizer is an internal one.

Claim 29 (original): A liquid crystal information display according to claim 13, wherein at least one polarizer is an internal one.

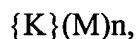
Claim 30 (original): A liquid crystal information display according to claim 14, wherein at least one polarizer is an internal one.

Claim 31 (original): A liquid crystal information display according to claim 15, wherein at least one polarizer is an internal one.

Claim 32 (original): A liquid crystal information display according to claim 16, wherein at least one polarizer is an internal one.

Claim 33 (original): A liquid crystal information display according to claim 17, wherein at least one polarizer is an internal one.

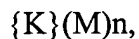
Claim 34 (original): A liquid crystal information display according to claim 3, wherein at least one optically anisotropic layer is an oriented film of organic dye of the formula:



where K – the dye, chemical formula of which contains ionogenic group or groups, same or different, which provide its solubility in polar solvents in order to form lyotropic liquid-crystal phase, M - the anti-ion, n – the number of anti-ions in the dye molecule, which may be a fraction when one anti-ion belongs to several molecules, and in the case when $n > 1$ the anti-ions

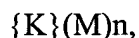
may be different.

Claim 35 (original): A liquid crystal information display according to claim 4, wherein at least one optically anisotropic layer is an oriented film of organic dye of the formula:



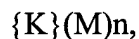
where K – the dye, chemical formula of which contains ionogenic group or groups, same or different, which provide its solubility in polar solvents in order to form lyotropic liquid-crystal phase, M - the anti-ion, n – the number of anti-ions in the dye molecule, which may be a fraction when one anti-ion belongs to several molecules, and in the case when $n > 1$ the anti-ions may be different.

Claim 36 (original): A liquid crystal information display according to claim 5, wherein at least one optically anisotropic layer is an oriented film of organic dye of the formula:



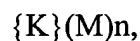
where K – the dye, chemical formula of which contains ionogenic group or groups, same or different, which provide its solubility in polar solvents in order to form lyotropic liquid-crystal phase, M - the anti-ion, n – the number of anti-ions in the dye molecule, which may be a fraction when one anti-ion belongs to several molecules, and in the case when $n > 1$ the anti-ions may be different.

Claim 37 (original): A liquid crystal information display according to claim 6, wherein at least one optically anisotropic layer is an oriented film of organic dye of the formula:



where K – the dye, chemical formula of which contains ionogenic group or groups, same or different, which provide its solubility in polar solvents in order to form lyotropic liquid-crystal phase, M - the anti-ion, n – the number of anti-ions in the dye molecule, which may be a fraction when one anti-ion belongs to several molecules, and in the case when $n > 1$ the anti-ions may be different.

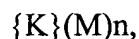
Claim 38 (original): A liquid crystal information display according to claim 7, wherein at least one optically anisotropic layer is an oriented film of organic dye of the formula:



where K – the dye, chemical formula of which contains ionogenic group or groups, same

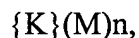
or different, which provide its solubility in polar solvents in order to form lyotropic liquid-crystal phase, M - the anti-ion, n – the number of anti-ions in the dye molecule, which may be a fraction when one anti-ion belongs to several molecules, and in the case when $n > 1$ the anti-ions may be different.

Claim 39 (original): A liquid crystal information display according to claim 8, wherein at least one optically anisotropic layer is an oriented film of organic dye of the formula:



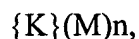
where K – the dye, chemical formula of which contains ionogenic group or groups, same or different, which provide its solubility in polar solvents in order to form lyotropic liquid-crystal phase, M - the anti-ion, n – the number of anti-ions in the dye molecule, which may be a fraction when one anti-ion belongs to several molecules, and in the case when $n > 1$ the anti-ions may be different.

Claim 40 (original): A liquid crystal information display according to claim 9, wherein at least one optically anisotropic layer is an oriented film of organic dye of the formula:



where K – the dye, chemical formula of which contains ionogenic group or groups, same or different, which provide its solubility in polar solvents in order to form lyotropic liquid-crystal phase, M - the anti-ion, n – the number of anti-ions in the dye molecule, which may be a fraction when one anti-ion belongs to several molecules, and in the case when $n > 1$ the anti-ions may be different.

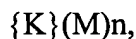
Claim 41 (original): A liquid crystal information display according to claim 10, wherein at least one optically anisotropic layer is an oriented film of organic dye of the formula:



where K – the dye, chemical formula of which contains ionogenic group or groups, same or different, which provide its solubility in polar solvents in order to form lyotropic liquid-crystal phase, M - the anti-ion, n – the number of anti-ions in the dye molecule, which may be a fraction when one anti-ion belongs to several molecules, and in the case when $n > 1$ the anti-ions may be different.

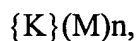
Claim 42 (original): A liquid crystal information display according to claim 11, wherein

at least one optically anisotropic layer is an oriented film of organic dye of the formula:



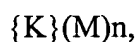
where K – the dye, chemical formula of which contains ionogenic group or groups, same or different, which provide its solubility in polar solvents in order to form lyotropic liquid-crystal phase, M - the anti-ion, n – the number of anti-ions in the dye molecule, which may be a fraction when one anti-ion belongs to several molecules, and in the case when $n > 1$ the anti-ions may be different.

Claim 43 (original): A liquid crystal information display according to claim 12, wherein at least one optically anisotropic layer is an oriented film of organic dye of the formula:



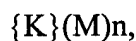
where K – the dye, chemical formula of which contains ionogenic group or groups, same or different, which provide its solubility in polar solvents in order to form lyotropic liquid-crystal phase, M - the anti-ion, n – the number of anti-ions in the dye molecule, which may be a fraction when one anti-ion belongs to several molecules, and in the case when $n > 1$ the anti-ions may be different.

Claim 44 (original): A liquid crystal information display according to claim 13, wherein at least one optically anisotropic layer is an oriented film of organic dye of the formula:



where K – the dye, chemical formula of which contains ionogenic group or groups, same or different, which provide its solubility in polar solvents in order to form lyotropic liquid-crystal phase, M - the anti-ion, n – the number of anti-ions in the dye molecule, which may be a fraction when one anti-ion belongs to several molecules, and in the case when $n > 1$ the anti-ions may be different.

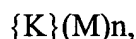
Claim 45 (original): A liquid crystal information display according to claim 14, wherein at least one optically anisotropic layer is an oriented film of organic dye of the formula:



where K – the dye, chemical formula of which contains ionogenic group or groups, same or different, which provide its solubility in polar solvents in order to form lyotropic liquid-crystal phase, M - the anti-ion, n – the number of anti-ions in the dye molecule, which may be a

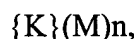
fraction when one anti-ion belongs to several molecules, and in the case when $n > 1$ the anti-ions may be different.

Claim 46 (original): A liquid crystal information display according to claim 15, wherein at least one optically anisotropic layer is an oriented film of organic dye of the formula:



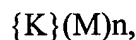
where K – the dye, chemical formula of which contains ionogenic group or groups, same or different, which provide its solubility in polar solvents in order to form lyotropic liquid-crystal phase, M – the anti-ion, n – the number of anti-ions in the dye molecule, which may be a fraction when one anti-ion belongs to several molecules, and in the case when $n > 1$ the anti-ions may be different.

Claim 47 (original): A liquid crystal information display according to claim 16, wherein at least one optically anisotropic layer is an oriented film of organic dye of the formula:



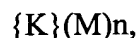
where K – the dye, chemical formula of which contains ionogenic group or groups, same or different, which provide its solubility in polar solvents in order to form lyotropic liquid-crystal phase, M – the anti-ion, n – the number of anti-ions in the dye molecule, which may be a fraction when one anti-ion belongs to several molecules, and in the case when $n > 1$ the anti-ions may be different.

Claim 48 (original): A liquid crystal information display according to claim 17, wherein at least one optically anisotropic layer is an oriented film of organic dye of the formula:



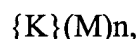
where K – the dye, chemical formula of which contains ionogenic group or groups, same or different, which provide its solubility in polar solvents in order to form lyotropic liquid-crystal phase, M – the anti-ion, n – the number of anti-ions in the dye molecule, which may be a fraction when one anti-ion belongs to several molecules, and in the case when $n > 1$ the anti-ions may be different.

Claim 49 (original): A liquid crystal information display according to claim 18, wherein at least one optically anisotropic layer is an oriented film of organic dye of the formula:



where K – the dye, chemical formula of which contains ionogenic group or groups, same or different, which provide its solubility in polar solvents in order to form lyotropic liquid-crystal phase, M - the anti-ion, n – the number of anti-ions in the dye molecule, which may be a fraction when one anti-ion belongs to several molecules, and in the case when $n > 1$ the anti-ions may be different.

Claim 50 (original): A liquid crystal information display according to claim 19, wherein at least one optically anisotropic layer is an oriented film of organic dye of the formula:



where K – the dye, chemical formula of which contains ionogenic group or groups, same or different, which provide its solubility in polar solvents in order to form lyotropic liquid-crystal phase, M - the anti-ion, n – the number of anti-ions in the dye molecule, which may be a fraction when one anti-ion belongs to several molecules, and in the case when $n > 1$ the anti-ions may be different.

Claim 51 (original): A liquid crystal information display according to claim 3 wherein at least one optically anisotropic layer is a crystalline film.